

NM172.223AA01

 Motor-assisted format adjustment, through hollow shaft $\varnothing 25$ mm

Article number: 11726529

Overview

- Two-line backlit LCD display
- Through hollow shaft $\varnothing 25$ mm
- Interface: CANopen®
- 2 x connector M12, male/female, 5-pin;
1 x connector M16, female, 12-pin
- Singleturn resolution: 2304 steps
- Multiturn resolution: 4096 / 12 bit
- Protection IP 55
- Suitable for DC motor connection with 4 control inputs 24 V (CCW rotation, CW rotation, low speed ≤ 4 rpm, high speed ≤ 100 rpm)



Technical data

Technical data - electrical ratings

Voltage supply	24 VDC ± 10 %
Current consumption	≤ 30 mA (without external load)
Current load	≤ 1 A (connection cable)
Display	LCD, 7-segment display, 2-lines, backlit
Number of digits	6-digits
Measuring principle	Absolute multiturn measuring system
Steps per revolution	2304
Number of revolutions	4096 / 12 bit
Spindle pitch	≤ 23 mm (programmable)
Interface	CANopen®
Profile conformity	CANopen® CiA Communication profile DS 301 LSS profile DSP 305 Device profile DS 406
Programmable parameters	Display position horizontal/vertical Measuring unit mm/inch Counting direction Spindle pitch Spindle tolerance Positioning direction Direction arrows Tolerance window Round up/down
Motive positioning	Suitable for DC motor connection with 4 control inputs 24 V (CCW rotation, CW rotation, low speed ≤ 4 rpm, high speed ≤ 100 rpm)

Technical data - electrical ratings

Emitted interference	EN 61000-6-4
Interference immunity	EN 61000-6-2
Approval	UL approval / E63076
Technical data - mechanical design	
Shaft type	$\varnothing 25$ mm (through hollow shaft)
Operating speed	≤ 600 rpm (short-term)
Protection EN 60529	IP 55 (with mounted mating connector)
Operating temperature	$-10 \dots +50$ °C
Storage temperature	$-20 \dots +70$ °C
Relative humidity	80 % non-condensing
Resistance	EN 60068-2-6 Vibration ± 3.5 mm - 5-26.9 Hz, 10 g 26.9-500 Hz EN 60068-2-27 Shock 5 g, 30 ms
Torque support	Torque pin provided at housing
Connection	Connector 2xM12, male/female, 5-pin, cable length 300 mm Connector M16, female, 12-pin, cable length 500 mm, for motor
Operation / keypad	Two buttons for format adjustment in jog mode
Dimensions	56 x 106 x 84 mm
Mounting type	Directly by means of grub screw
Weight approx.	450 g
Material	Polycarbonate black, UL 94V-0

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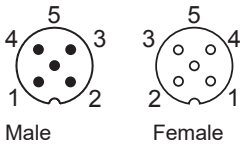
Description

The NM172 spindle position display supports setup engineers in automatic format alignment. The spindle position display is connected to the related DC motor via M16 connector. This connection delivers the rotation signals for "Clockwise" and "Counterclockwise" as well as the speed signals for "fast/creep speed" to the motor without runtime time delay. For initial shaft positioning or repositioning, the spindle position display features two buttons for aligning operations to the left or to the right. A press on one of these two buttons will make the motor rotate in the respective direction. For jog mode, i.e. alignments at defined step width, a short touch is sufficient. This allows the operator to set new shaft positions with up to $\pm 1/100$ mm accuracy in his direct field of view. Automatic format alignment allows for saving shaft positions to a controller as parameter profiles that can be easily retrieved at all times.

Terminal assignment

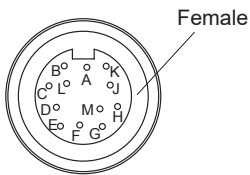
Connector 2xM12, male/female, 5-pin – CANopen®

Pin	Assignment
1	Shield
2	+Vs
3	GND
4	CAN_H
5	CAN_L



Connector M16, female, 12-pin – motor

Pin	Assignment
A	–
B	Motor left
C	Motor right
D	Speed
E	–
F	Key 1 external
G	Key 2 external
H	–
J	–
K	Error signal
L	Speed
M	GND



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CANopen® features

Operating modes	<ul style="list-style-type: none"> Timer-driven (Event-Time) Synchronously triggered (Sync) Asynchronous triggered (change of data)
Node Monitoring	Heartbeat consumer/producer
Programmable parameters	<ul style="list-style-type: none"> Scaling (spindle pitch) Target value of the spindle position Display parameters (measuring unit, display position, etc.) Parameters for motor-assisted adjustment Spindle tolerance compensation CAN interface parameters
Default	<ul style="list-style-type: none"> Baud rate 125 kbit/s Node-ID 127 No terminating resistor

Dimensions

